Zonet®

ZEW2546

802.11n **Wireless** USB Adapter

USER MANUAL

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Chapter 1 Introduction

1.1 Welcome

Thank you for purchasing Zonet ZEW2546-802.11n wireless USB adapter. ZEW2546 connects you with IEEE802.11n networks at receiving rate up to an incredible 300Mbps! By using the reflection signal, 802.11n's "Multiple In, Multiple Out" (MIMO) technology increases the range and reduces "dead spots" in the wireless coverage area.

WPS (Wi-Fi Protected Setup) simplify the security setup and management of Wi-Fi networks. Supports WMM for Multimedia Applications with Quality of Service in Wi-Fi® Networks.

ZEW2546 giving you an instant network today, and the flexibility to handle tomorrow's expansion and speed.

1.2 Product Feature

- Complies with IEEE 802.11n, IEEE 802.11g and IEEE 802.11b standards
- Provides USB2.0 port
- Provides 300Mbps receiving rate and 150Mbps sending rate
- Supports 20MHz/40MHz frequency width
- Auto-detects and changes the network transmission rate
- Provides two work modes: Infrastructure and Ad-Hoc
- Supports 64/128-bit WEP, WPA, WPA2 encryption methods and 802.1x security authentication standard
- WPS (Wi-Fi Protected Setup) simplify the security setup and management of Wi-Fi networks.
- Supports WMM for Multimedia Applications with Quality of Service in Wi-Fi® Networks

1.3 Contents of Package

- One ZEW2546
- One Installation CD w/User Manual
- One Quick Installation Guide

Contact your local authorized reseller or the store purchased from for any items damaged and/or missing.

1.4 Before You Begin

You must have the following:

- A laptop computer/desktop PC with an available USB 2.0 slot
- Minimum 300MHz processor and 32MB memory
- Windows 2000, XP, Vista, 7
- A CD-ROM Drive
- USB controller properly installed and working in the laptop computer
- 802.11n or 802.11b/g Access Point (for infrastructure Mode) or another 802.11n or 802.11b/g wireless adapter (for Ad-Hoc; Peer-to-Peer networking mode.)

Chapter 2 Installation

2.1 Software Installation

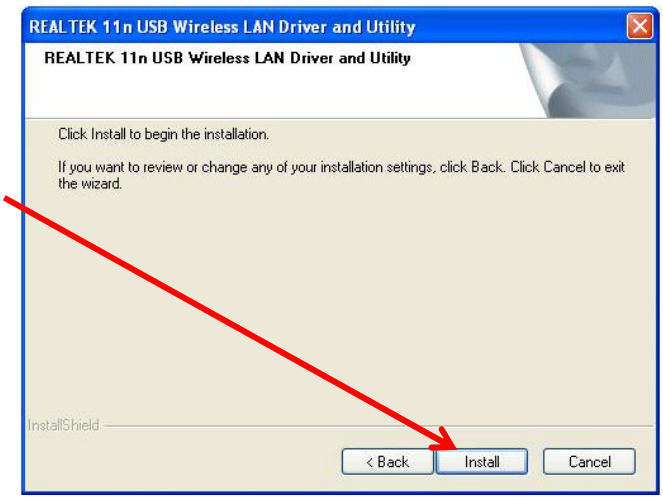
NOTE: *Snap-shot screens of the following installation procedure are based on Windows XP. Installation procedures will be similar for other windows operating systems.*

1. Insert Installation CD to your CD-ROM drive. Browse CD and double-click **setup.exe** in Driver folder to execute it. The wizard will run and install all necessary files to your computer automatically.

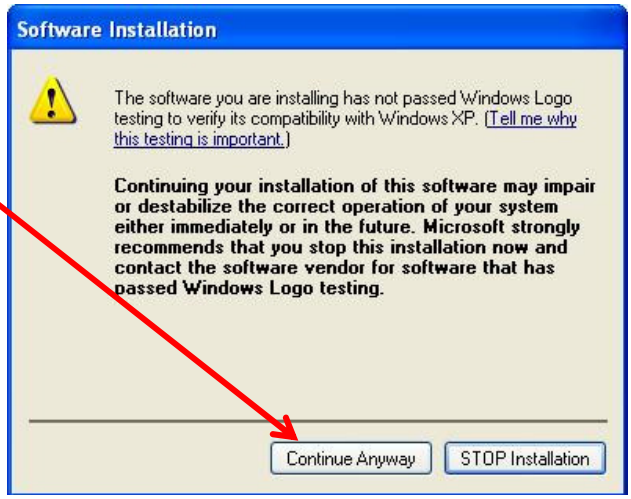
2. Click ***Next*** to continue after selecting setup language.

REALTEK 11n USB Wireless LAN Driver and Utility
REALTEK 11n USB Wireless LAN Driver and Utility
The InstallShield Wizard will install REALTEK 11n USB Wireless LAN Driver and Utility on your computer. To continue, click Next.
< Back
Next >
Cancel

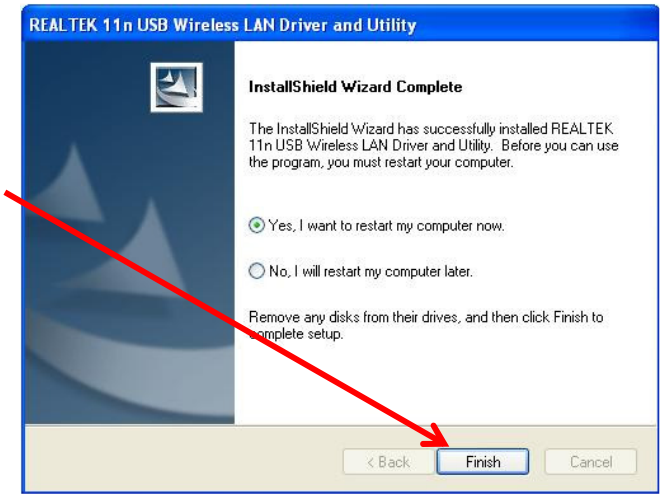
3. Click ***Install*** to start the installation.


REALTEK 11n USB Wireless LAN Driver and Utility
REALTEK 11n USB Wireless LAN Driver and Utility
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

4. During the installation, the following dialogue may appear. Click ***Continue Anyway*** to continue.


Software Installation
The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

5. Click ***Finish*** to complete the software installation.


REALTEK 11n USB Wireless LAN Driver and Utility
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed REALTEK 11n USB Wireless LAN Driver and Utility. Before you can use the program, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
< Back
Finish
Cancel

Now your computer will restart automatically.

2.2 Hardware Installation

LED Indicator:

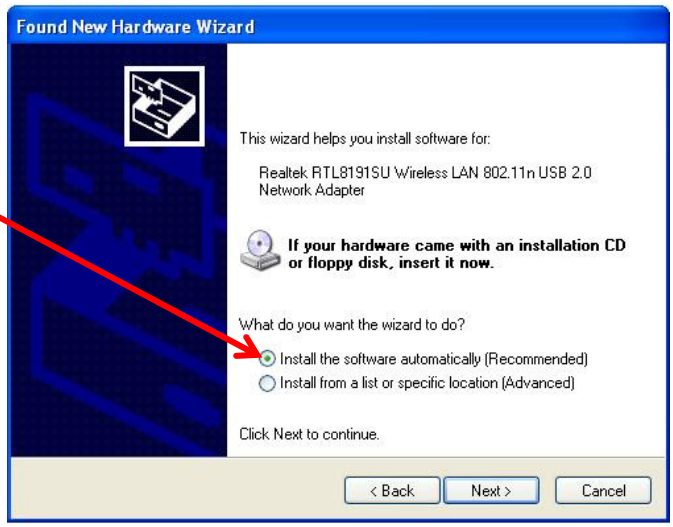
	Status	Description
	ON	Indicates a valid connection
	Flashing	Indicates ZEW2546 is transferring or receiving data

Installation:

1. Power on your PC, let the operating system boot up completely, and log in as needed.

2. Insert ZEW2546 into a USB slot of your computer.

3. Select ***install the software automatically (Recommended)*** when **Found New Hardware** window appears.


Found New Hardware Wizard
This wizard helps you install software for:
Realtek RTL8191SU Wireless LAN 802.11n USB 2.0 Network Adapter
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

Now your have completed software and hardware installation for ZEW2546.

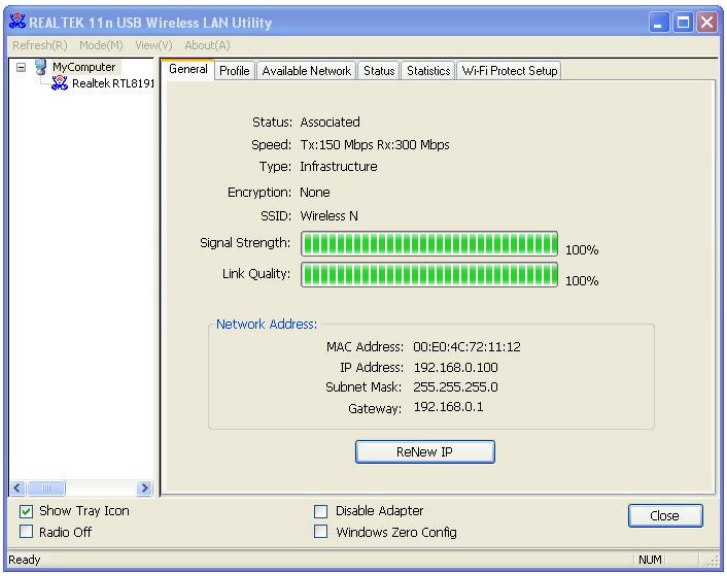
Chapter 3 Configuration

There are two ways to run REALTEK 11n USB Wireless LAN Utility as follows:

1. Click ***Start*** → ***Programs*** → ***REALTEK 11n USB Wireless LAN Utility*** → ***REALTEK 11n USB Wireless LAN Utility*** to run the utility.
2. Double click ***REALTEK 11n USB Wireless LAN Utility*** icon to run the utility.

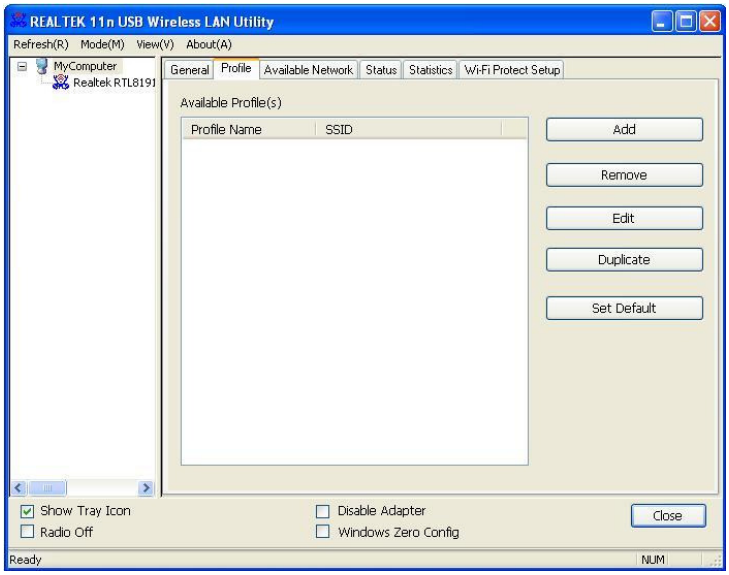
3.1 General

General tab shows detail information about the current connection.

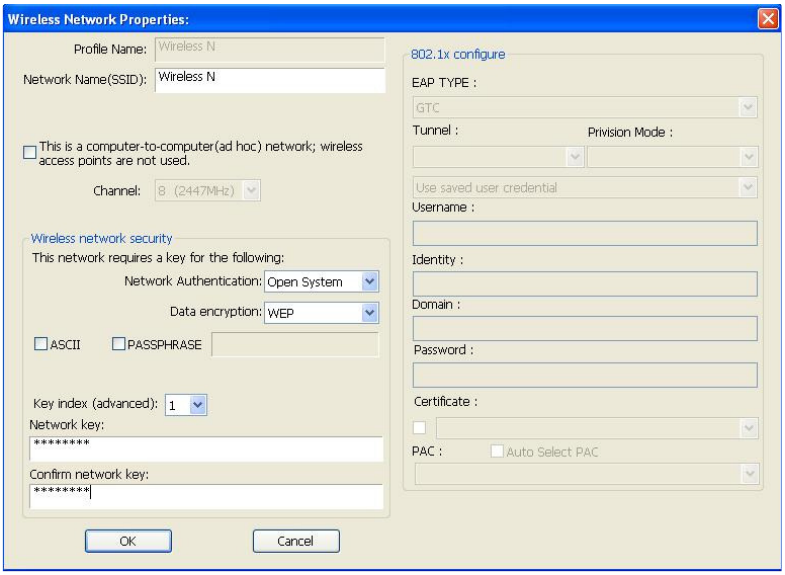


3.2 Profile

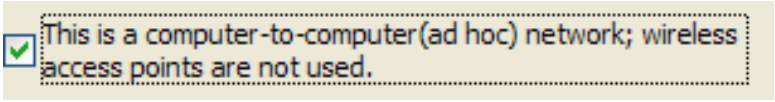
Profile can keep your favorite wireless setting among your home, office, and other public hotspot. You may save multiple profiles and activate the one at your preference.



3.2.1 Add/Edit



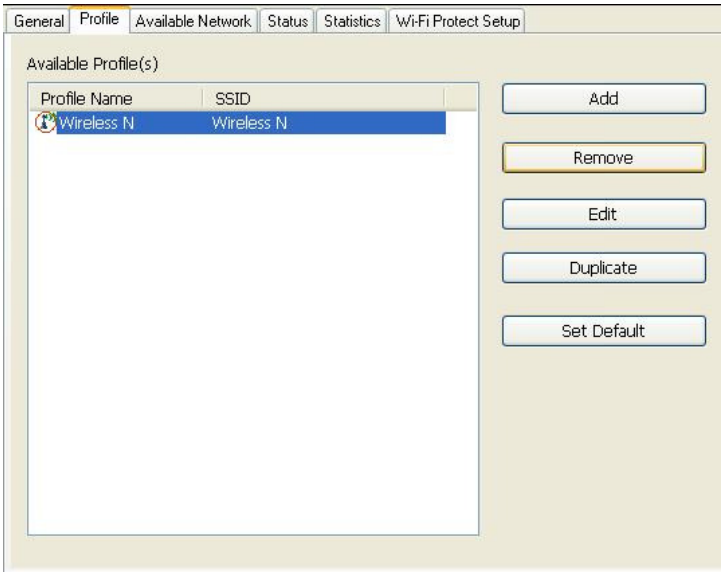
- **Profile Name:** Specify one name for the profile
- **SSID:** Name of intended wireless network.
- **Network Type:**
  - **Infrastructure:** A wireless Router and/or Access Point is required.
  - **Ad-hoc:** Peer-to-Peer network, no base station required.
    Check the checkbox to activate Ad-hoc mode.



- **Channel:** Channel of the connected wireless network.
- **Authentication:** Select from Open System, Shared Key, WPA-PSK, WPA2-PSK, WPA 802.1x, WPA2 802.1x, WEP 802.1x, WPA CCKM and WPA2 CCKM.
- **Encryption:** Select from WEP, TKIP, AES, and Disable

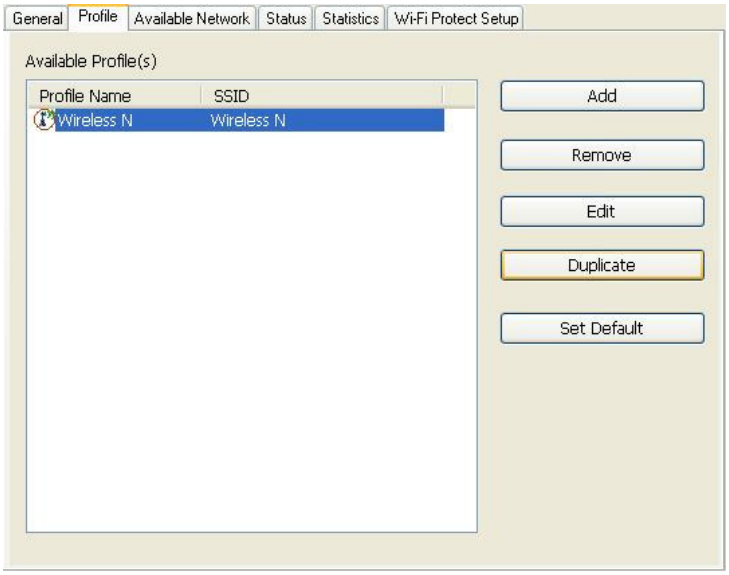
3.2.2 Remove

Select a profile and click ***Remove*** button to delete this profile.

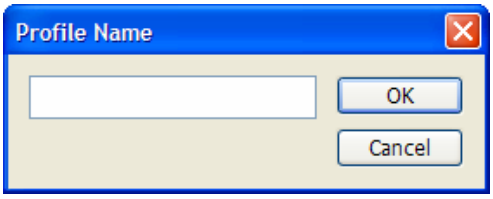


3.2.3 Duplicate

Select a profile which you want to copy and then click ***Duplicate***.

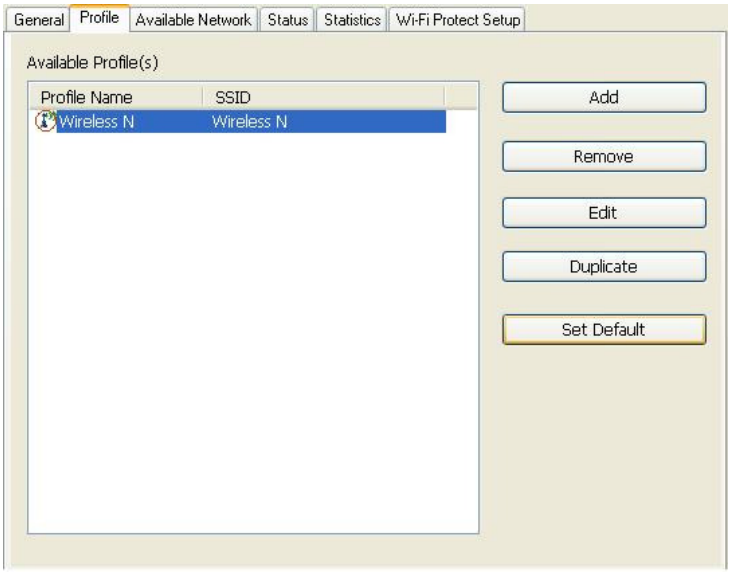


Input the new profile name when ***Profile Name*** window appears.



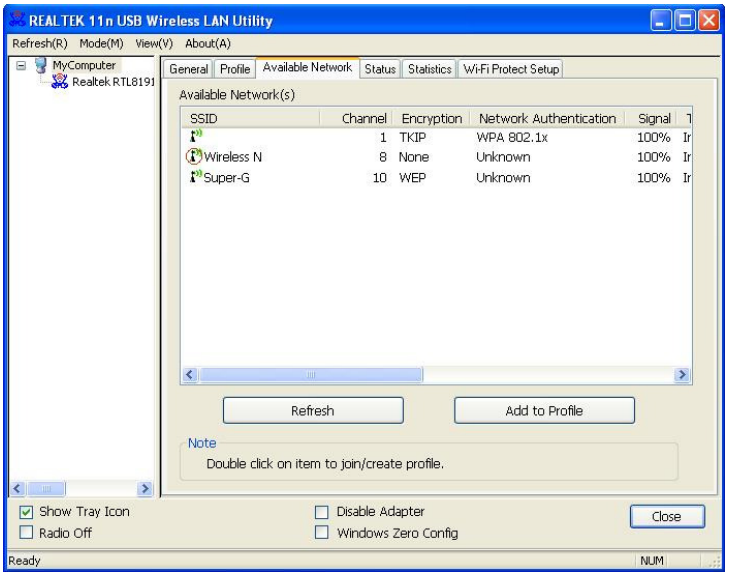
3.2.4 Set Default

Select a profile and click ***Set Default*** button to make the profile connecting to wireless network automatically when the utility running next time.

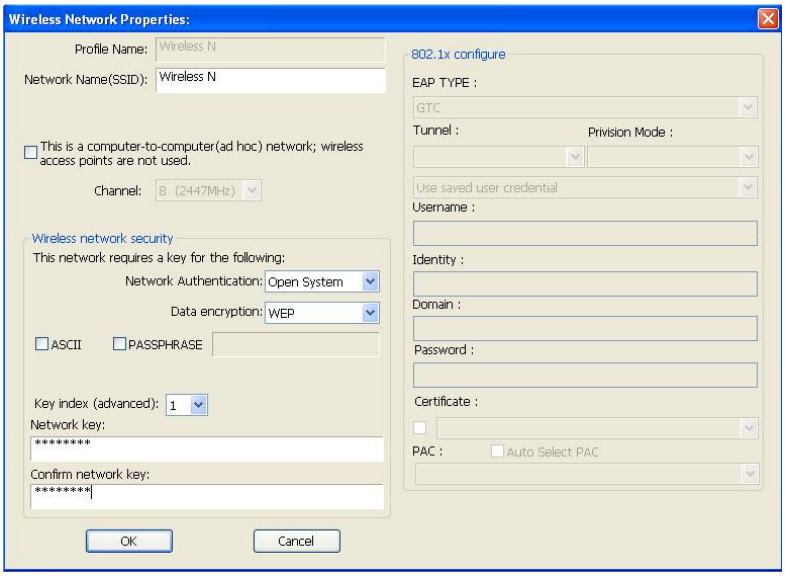


3.3 Available Network

Under Available Network tab, you will know information of all surrounding wireless networks from the last scan.
Click ***Refresh*** to update and refresh.



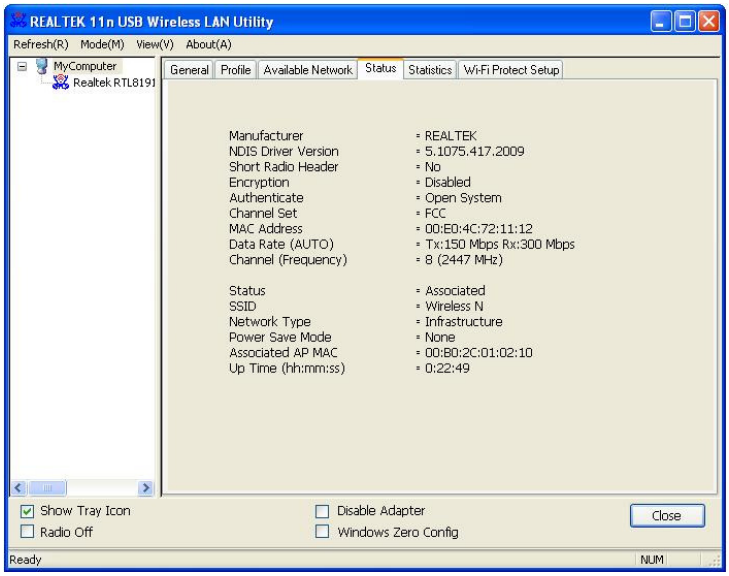
Double-click the network you want to connect.



Modify the profile information according to your demand.

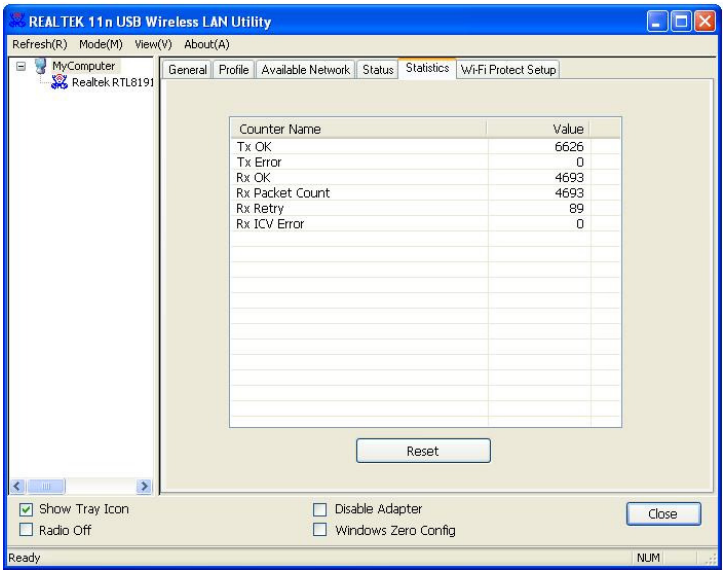
3.4 Status

Status tab displays the detailed information of current connection.



3.5 Statistics

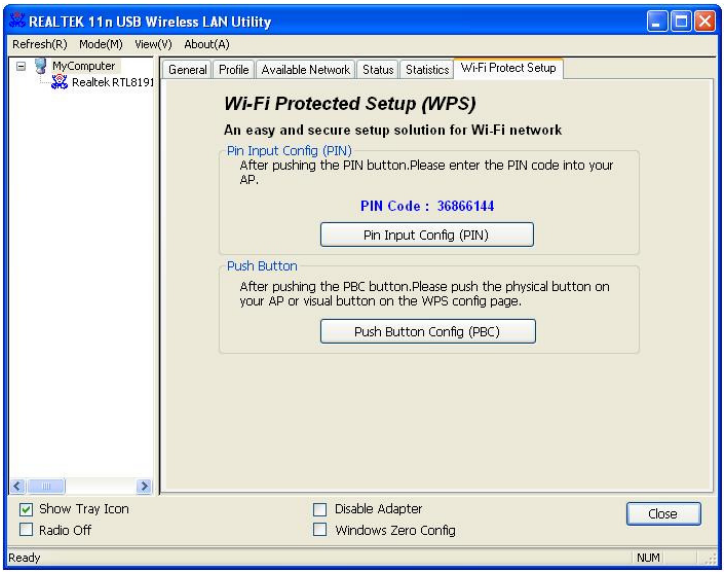
Statistics tab displays the detail counter information based on 802.11 MIB counters. This page translates that MIB counters into a format easier for user to understand.



- **Reset:** to renew the statistics.

3.6 Wi-Fi Protect Setup

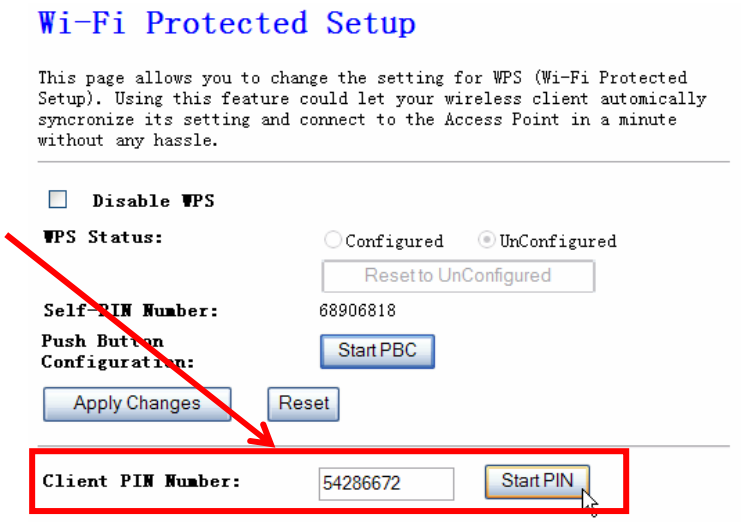
Wi-Fi Protect Setup tab supports the configuration setup using PIN configuration method or PBC configuration method.
WPS simplify the security setup and management of Wi-Fi networks.


REALTEK 11n USB Wireless LAN Utility
Refresh(R) Mode(M) View(V) About(A)
MyComputer
Realtek RTL8191
General Profile Available Network Status Statistics Wi-Fi Protect Setup
Wi-Fi Protected Setup (WPS)
An easy and secure setup solution for Wi-Fi network
Pin Input Config (PIN)
After pushing the PIN button,Please enter the PIN code into your AP.
PIN Code : 36866144
Pin Input Config (PIN)
Push Button
After pushing the PBC button,Please push the physical button on your AP or visual button on the WPS config page.
Push Button Config (PBC)
Show Tray Icon
Radio Off
Disable Adapter
Windows Zero Config
Close
Ready
NUM

3.6.1 Pin Input Config (PIN)

1. Input ZEW2546's PIN Code into AP and click **Start PIN** on the AP-Router WPS config page

Note: *AP operating page may vary but similar from different brands*.


Wi-Fi Protected Setup
This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless client automically syncronize its setting and connect to the Access Point in a minute without any hassle.
Disable WPS
WPS Status:
Configured
UnConfigured
Reset to UnConfigured
Self-PIN Number:
68906818
Push Button Configuration:
Start PBC
Apply Changes
Reset
Client PIN Number:
54286672
Start PIN

2. Click ***Pin Input Config(PIN)*** under ZEW2546 ***Wi-Fi Protect Setup*** tab

Pin Input Config (PIN)
After pushing the PIN button.Please enter the PIN code into your AP.
PIN Code : 54286672
Pin Input Config (PIN)

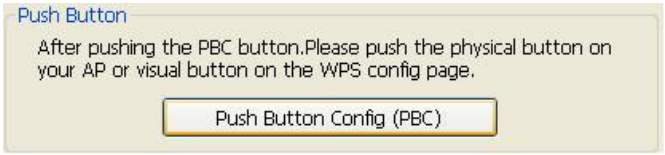
3. Select one ***WPS AP*** you want to connect and click ***Select***.

4. Wait until ***PIN method*** window appear, the secure connection between AP and ZEW2546 will be founded automatically.

Wi-Fi Protected Setup - PIN method
Wi-Fi Protected Setup - PIN method
Please enter the following PIN code into your AP .
PIN Code : 54286672
Status : [Wireless N] WPS Protocol Communication ...
Cancel

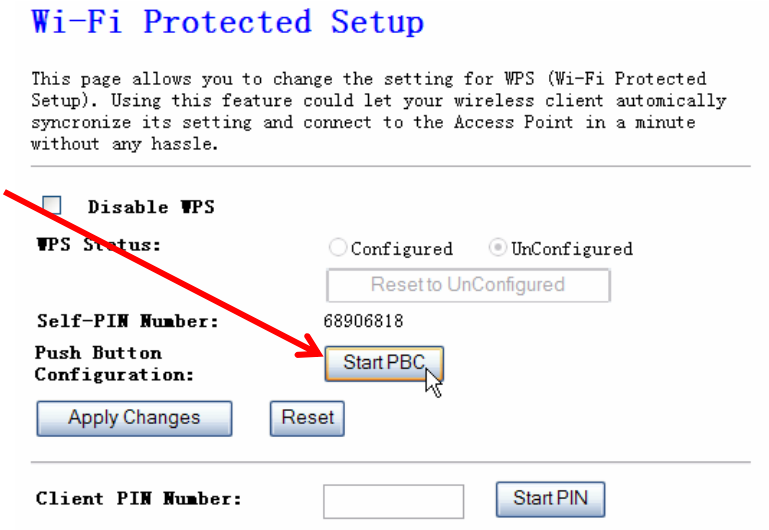
3.6.2 Push Button Config (PBC)

1. Click ***Push Button Config (PBC)*** under ZEW2546 ***Wi-Fi Protect Setup*** tab.

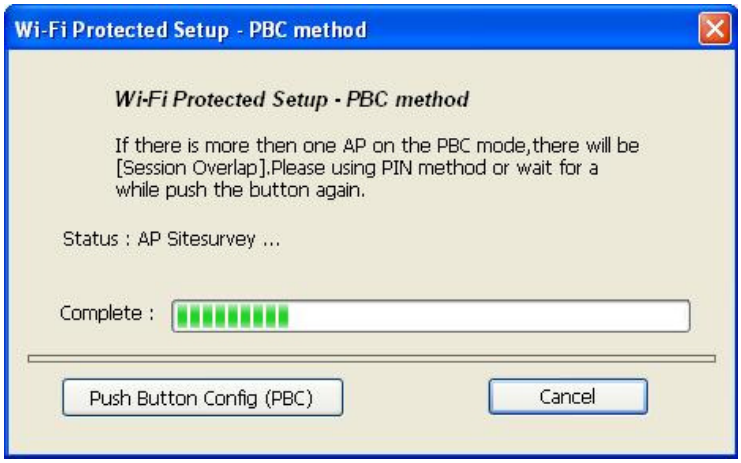

Push Button
After pushing the PBC button.Please push the physical button on your AP or visual button on the WPS config page.
Push Button Config (PBC)

2. Click **Start PBC** on the AP-Router WPS config page or push the ***WPS button*** on your AP.

Note: *AP operating page may vary but similar from different brands*.


Wi-Fi Protected Setup
This page allows you to change the setting for WPS (Wi-Fi Protected Setup). Using this feature could let your wireless client automically syncronize its setting and connect to the Access Point in a minute without any hassle.
Disable WPS
WPS Status:
Configured
UnConfigured
Reset to UnConfigured
Self-PIN Number:
68906818
Push Button Configuration:
Start PBC
Apply Changes
Reset
Client PIN Number:
Start PIN

3. Wait until ***PBC method*** window appear, the secure connection between AP and ZEW2546 will be founded automatically.


Wi-Fi Protected Setup - PBC method
Wi-Fi Protected Setup - PBC method
If there is more then one AP on the PBC mode,there will be [Session Overlap].Please using PIN method or wait for a while push the button again.
Status : AP Sitesurvey ...
Complete :
Push Button Config (PBC)
Cancel

Note:

If there is more than one AP on PBC mode, there will be session overlap. Please using PIN Input Config(PIN) or wait for a while push the button again.

Chapter 4 Product Specifications

Specifications:

Chipset		Realtek RTL8191SU
Standards		IEEE 802.11n, IEEE 802.11g, IEEE 802.11b
Interface		USB2.0
OS		Windows 2000/ XP/ Vista/ 7
Frequency Range		2.412GHz~2.4835GHz
Modulation Method		CCK , OFDM
speed	11b	11 Mbps/9 Mbps/6 Mbps/5.5 Mbps/2 Mbps/ 1 Mbps
	11g	54 Mbps/48 Mbps/36 Mbps /24 Mbps/ 18 Mbps/12 Mbps/11 Mbps/9 Mbps/6 Mbps
	11n	300Mbps ~ 270Mbps
Output Power	11b	18dBm
	11g	15dBm
	11n	13dBm
Security		64/128-bit WEP, WPA/WPA2, 802.1x
Antenna type		printed antenna
Channels		11 Channels (USA, Canada) 13 Channels (Europe) 14 Channels (Japan)
Transmit distance		Indoors : up to 150 meters Outdoors : up to 600 meters
Operating Temperature		0ºC ~ 50ºC
Storage Temperature		-40ºC~70ºC
Operating Humidity		10%~ 90% RH Non-condensing
Storage Humidity		5% ~ 90% RH Non-condensing
LED		Link/Activity
Dimension(L x W x H)		60mm x 24mm x 8.5mm
Weight		7.7g

Chapter 5 TroubleShooting

This chapter provides solutions to problems that may occur during the installation and operation of ZEW2546. Read the descriptions below to solve your problems.

1. The ZEW2546 does not work properly.

Reinsert ZEW2546 into your PC's USB slot.
Right click on My Computer and select Properties. Select the device manager and click on the Network Adapter. You will find ZEW2546 if it is installed successfully. If you see the yellow exclamation mark, the resources are conflicting. You will see the status of ZEW2546. If there is a yellow question mark, please check the following:
Make sure that your PC has a free IRQ (Interrupt ReQuest, a hardware interrupt on a PC.)
Make sure that you have inserted the right adapter and installed the proper driver.
If ZEW2546 does not function after attempting the above steps, remove it and do the following:
Uninstall the driver software from your PC.
Restart your PC and repeat the hardware and software installation as specified in this User Guide.

2. I cannot communicate with the other computers linked via Ethernet in the Infrastructure configuration.

Make sure that the PC to which ZEW2546 is associated is powered on.
Make sure that ZEW2546 is configured on the same channel and with the same security options as with the other computers in the Infrastructure configuration.

3. What should I do when the computer with ZEW2546 installed is unable to connect to the wireless network and/or the Internet?

Check that the LED indicators for the broadband modem are indicating normal activity. If not, there may be a problem with the broadband connection.
Check that the LED indicators on the wireless router are functioning properly. If not, check that the Power and Ethernet cables are firmly connected.
Check that the IP address, subnet mask, gateway, and DNS settings are correctly entered for the network.
In Infrastructure mode, make sure the same Service Set Identifier (SSID) is specified on the settings for the wireless clients and access points.
In Ad-Hoc mode, both wireless clients will need to have the same SSID. Please note that it might be necessary to set up one client to establish a BSS (Basic Service Set) and wait briefly before setting up other clients. This prevents several clients from trying to establish a BSS at the same time, which can result in

multiple singular BSSs being established, rather than a single BSS with multiple clients associated to it.
Check that the Network Connection for the wireless client is configured properly. If Security is enabled, make sure that the correct encryption keys are entered on both ZEW2546 and the access point.

4. I can't find any wireless access point / wireless device in Available *Network* tab.

- Click *Refresh* for few more times and see if you can find any wireless access point or wireless device.
- Please move closer to any known wireless access point.
- *Ad-hoc* function must be enabled for the wireless device you wish to establish a direct wireless link.
- Please adjust the position of ZEW2546 (you may have to move your computer if you're using a notebook computer) and click *Refresh* button for few more times. If you can find the wireless access point or wireless device you want to connect by doing this, try to move closer to the place where the wireless access point or wireless device is located.

5. Nothing happens when I click *11n USB Wireless LAN Utility*

- Please make sure ZEW2546 is inserted into your computer's USB port. If the 11n USB Wireless LAN Utility's icon is black, ZEW2546 is not detected by your computer.
- Reboot the computer and try again.
- Remove ZEW2546 and insert it into another USB port.
- Remove the driver and re-install.